Trust in Automation -- Before and After the Experience of Take-over Scenarios in a Highly Automated Vehicle

Abstract:
Highly automated vehicles (Level 3, [1]) are likely to enter the market within the next decade. By removing the driver from the driver-vehicle system, positive impacts, for instance on road-safety or fuel consumption, are expected. These predicted effects can only arise if automated vehicles are accepted by society. Trust as well as the attitude towards technology has been found to be a precursor in the acceptance formation process. Therefore, we conducted a driving simulator experiment within the interdisciplinary research group at the Munich Center of Technology in Society (MCTS) in order to investigate how the experience of automated driving will change trust in automation and the attitude of the driver towards automation. The sample consisted of 72 participants between 19 and 79 years (}